



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,700	02/05/2004	Torsten Niederdrank	P03,0625	4885

26574 7590 11/06/2006

SCHIFF HARDIN, LLP  
PATENT DEPARTMENT  
6600 SEARS TOWER  
CHICAGO, IL 60606-6473

EXAMINER
----------

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
----------	--------------

2615

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,700

Applicant(s)

NIEDERDRANK ET AL.

Examiner

Daniel Swerdlow

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The rejections made in the prior Office action are maintained. These rejections are repeated below for convenience.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 through 7, 9 through 16, 18 through 21, 23 through 27 and 29 through 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Koning (US Patent 6,240,194) in view of Williams et al. (US Patent 5,867,731).

4. Regarding Claim 1, De Koning discloses a system of hearing aids and a remote control (Fig. 1, reference 16, 18, 14) that sends a data packet (Fig. 4; column 7, lines 10-22) to implement a manual control process (column 4, lines 36-62) or a synchronization process (column 1, lines 34-45). Therefore, De Koning anticipates all elements of Claim 1 except assigning a priority for the send operation and the data packet length being a function of the assigned priority. Williams discloses a data transfer system prioritizes data packets according to size (i.e., sends data packets with a length as a function of assigned priority) (column 1, lines 26-31). Williams further discloses that such an arrangement reduces buffer requirements and component count (column 1, lines 17-25). It would have been obvious to one skilled in the art at the time of the invention to apply sending data packets with a length as a function of assigned

priority as taught by Williams to the hearing aid system taught by De Koning for the purpose of realizing the aforesaid advantages.

5. Regarding Claim 2, Williams further discloses suspending transfer of low priority short packets in favor of high priority long packets (column 2, line 62 through column 3, line 5).

6. Regarding Claim 3, De Koning further discloses a control signal packet that corresponds to the manual control process send claimed having a data field (Fig. 4, reference 108; column 7, lines 40-45) causing it to be longer than a reference signal packet and hence be highest priority under the prioritization method of Williams.

7. Regarding Claim 4, De Koning further discloses a reference signal packet that corresponds to the synchronization packets claimed and lacking a data field (Fig. 4, reference 108; column 7, lines 40-45) causing it to be shorter than a control signal packet and hence be lowest priority under the prioritization method of Williams.

8. Regarding Claim 5, Williams further discloses a bus that corresponds to the single channel claimed (Fig. 1, reference 15; column 2, lines 15-17).

9. Regarding Claim 6, De Koning further discloses a first part of the data packet comprising a header field that corresponds to the preamble claimed and a second part of the data packet comprising a data field that corresponds the user data claimed (Fig. 4, reference 100, 108; column 7, lines 10-22).

10. Regarding Claim 7, Williams further discloses measuring packet length by number of data words (column 2, lines 15-58). Since priority is inherently relative and integral this constitutes a priority N for a packet containing (N+1) words.

Art Unit: 2615

11. Claims 9 through 13 are essentially similar to Claims 1 through 5, respectively and are rejected on the same grounds.
12. Regarding Claim 14, De Koning further discloses integration into a remote control and hearing aids (Fig. 1, reference 14, 16, 18).
13. Claims 15 through 17 are essentially similar to Claims 6 through 8, respectively, and are rejected on the same grounds.
14. Claim 18 is essentially similar to Claim 2, including the limitations of Claim 1, and is rejected on the same grounds.
15. Claims 19 through 22 are essentially similar to Claims 5 through 8, respectively, and are rejected on the same grounds.
16. Claim 23 is essentially similar to Claim 2, including the limitations of Claim 1, and is rejected on the same grounds.
17. Claim 24 is essentially similar to Claim 5 and is rejected on the same grounds.
18. Claim 25 is essentially similar to Claim 14 and is rejected on the same grounds.
19. Claims 26 through 28 are essentially similar to Claims 6 through 8, respectively, and are rejected on the same grounds.
20. Claims 29 and 30 are essentially similar to Claims 9 and 10, respectively, and are rejected on the same grounds.
21. Claims 31 and 32 are essentially similar to Claims 9 and 10, respectively, and are rejected on the same grounds.

Art Unit: 2615

22. Claims 8, 17, 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Koning in view of Williams and further in view of Kari (WO 97/48249).

23. Regarding Claim 8, as shown above apropos of Claim 1, the combination of De Koning and Williams makes obvious all elements except reserving the channel after a high priority send. Kari discloses a packet radio system in which a high priority sender reserves the channel (p. 5, lines 23-30). One skilled in the art would have known that such an arrangement reduces delays in the transmission of high priority traffic. It would have been obvious to one skilled in the art at the time of the invention to apply channel reservation as taught by Kari to the combination made obvious by De Koning and Williams for the purpose of realizing the aforesaid advantage.

24. Claims 17, 22 and 28 are essentially similar to Claim 8 and are rejected on the same grounds.

### ***Response to Arguments***

25. Applicant's arguments filed 21 August 2006 have been fully considered but they are not persuasive.

26. In the first complete paragraph on page 3 through the paragraph spanning pages 3 and 4 of the response filed on 21 August 2006, applicant alleges that there is no motivation to apply the teaching of Williams to the hearing aid system of De Koning. Examiner respectfully disagrees. Applicants allegation is based on the incorrect assumption that the only consideration in hearing aid design is battery life. As shown in the prior art rejections made in the prior Office action and repeated above, Williams explicitly discloses that the arrangement taught reduces buffer requirements and component count. One skilled in the art would have known that this results in

Art Unit: 2615

smaller size and improved economy, both of which are important to hearing aid design, as well as improved battery life. In addition, De Koning discloses a system of hearing aids and a remote control that uses data packets (Fig. 4; (column 1, lines 34-45; column 7, lines 10-22; column 4, lines 36-62). As such, any teaching involving transmission and reception of data packets is relevant to the system disclosed in De Koning and one skilled in the art would look to the field of asynchronous data transfer for ways to improve on that system.

27. In the first three complete paragraphs on page 4 of the response, applicant alleges that Williams fails to disclose temporarily terminating sending of a data packet if a higher priority packet is received. Examiner respectfully disagrees. Williams clearly discloses that priority is assigned based on the length of data packets (column 3, lines 22-23), longer packets are transferred first (column 3, lines 2-5), and new packets are detected as existing packets are in process (column 3, lines 57-58). As such, terminating sending of a data packet if a higher priority packet is received is disclosed.

28. In the fourth complete paragraph on page 4 through the first complete paragraph on page 5 of the response, applicant alleges that Williams does not disclose defining priority as  $N$  when the data packet has a length of  $N+1$ . Examiner respectfully disagrees. As shown above, Williams discloses that priority is assigned based on the length of data packets (column 3, lines 22-23), longer packets are transferred first (column 3, lines 2-5). As such, a packet of word length 1 has the most immediate priority, followed by a packet of word length 2, etc. Because priorities are inherently sequential and relative, this is identical to the situation claimed.

29. In the second complete paragraph on page 5 through the second complete paragraph on page 6 of the response, applicant alleges that Kari fails to disclose reserving the channel for a

Art Unit: 2615

predefined period of time after a send with the highest priority. Examiner respectfully disagrees. As shown in the prior art rejections above, Kari discloses a packet radio system in which a high priority sender reserves the channel (p. 5, lines 23-30). The channel must remain unavailable to other senders for at least some guard period after the high priority sender completes a transmission. As such, the channel is reserved for a predetermined period as claimed.

### ***Conclusion***

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.



Art Unit: 2615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Swerdlow  
Primary Examiner  
Art Unit 2615

ds

1 November 2006